**a** Temperature

Temperature (C): 1000, 800, 600, 400, 200, 0

% Weight Loss: 100, 80, 60, 40, 20, 0

Sum of Gases

Balance

0  20  40  60  80  100

**b** Tars

Evolution (wt.%/min): 5, 4, 3, 2, 1, 0

Evolution Rate

Yield

Weight %: 100, 80, 60, 40, 20, 0

0  20  40  60  80  100

**c** Methane

Evolution (wt.%/min): .4, .3, .2, .1, .0

Weight %: 5, 4, 3, 2, 1, 0

0  20  40  60  80  100

Time (minutes)

**d** Water

Evolution (wt.%/min): 1.0, 0.8, 0.6, 0.4, 0.2, 0.0

Weight %: 30, 24, 18, 12, 8, 0

0  20  40  60  80  100

**e** $CO_2$

Evolution (wt.%/min): .4, .3, .2, .1, .0

Weight %: 10, 8, 6, 4, 2, 0

0  20  40  60  80  100

**f** CO

Evolution (wt.%/min): .6, .4, .2, .0
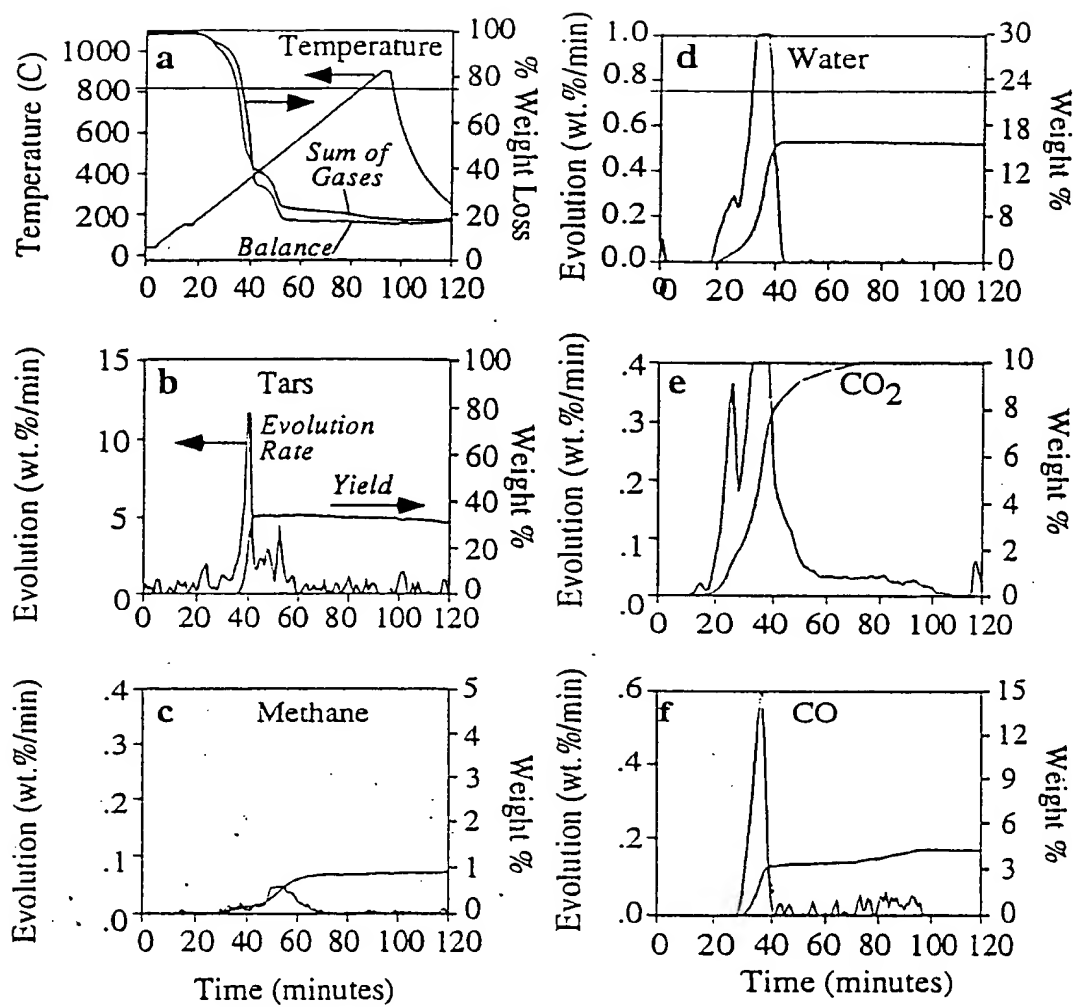
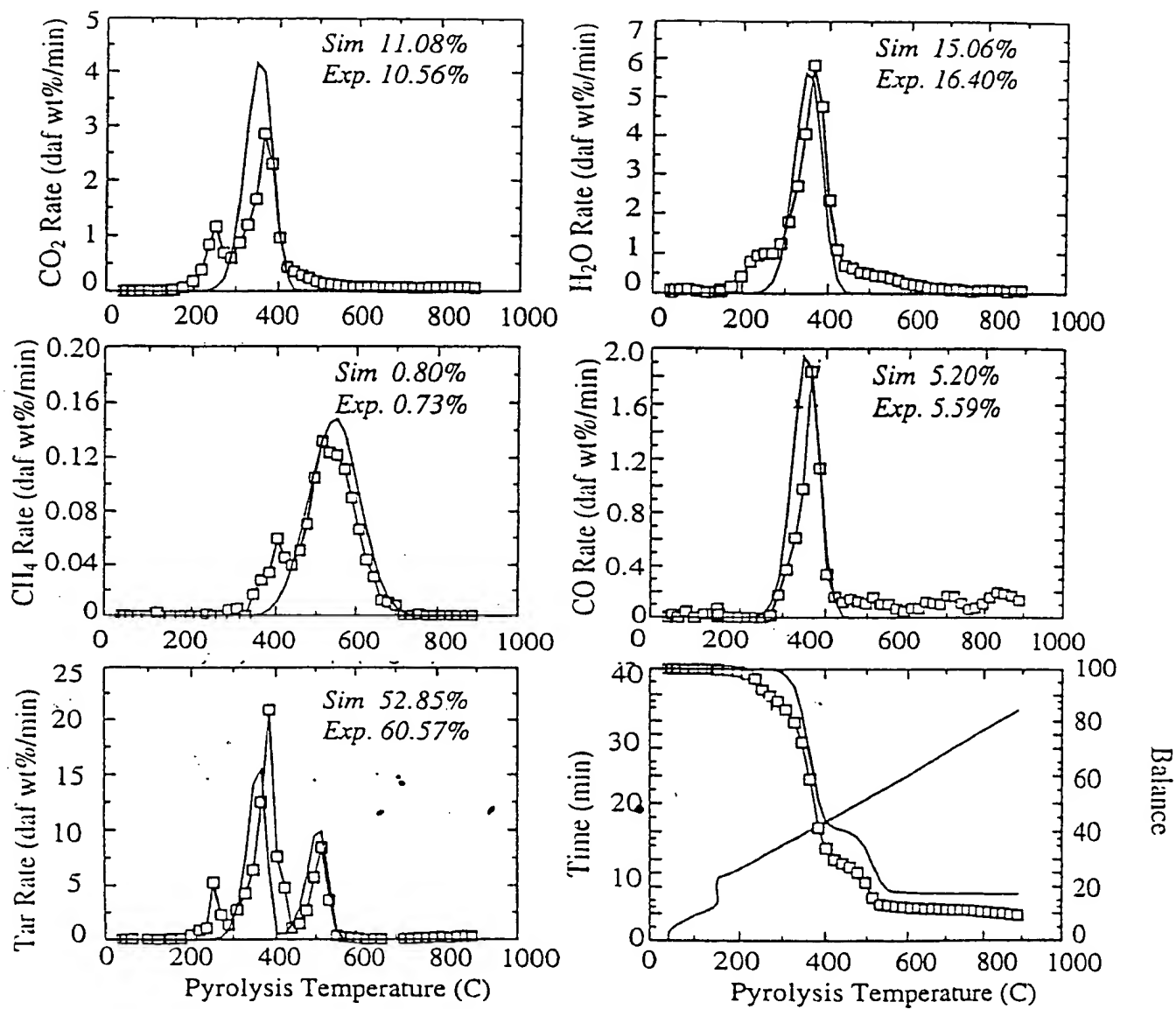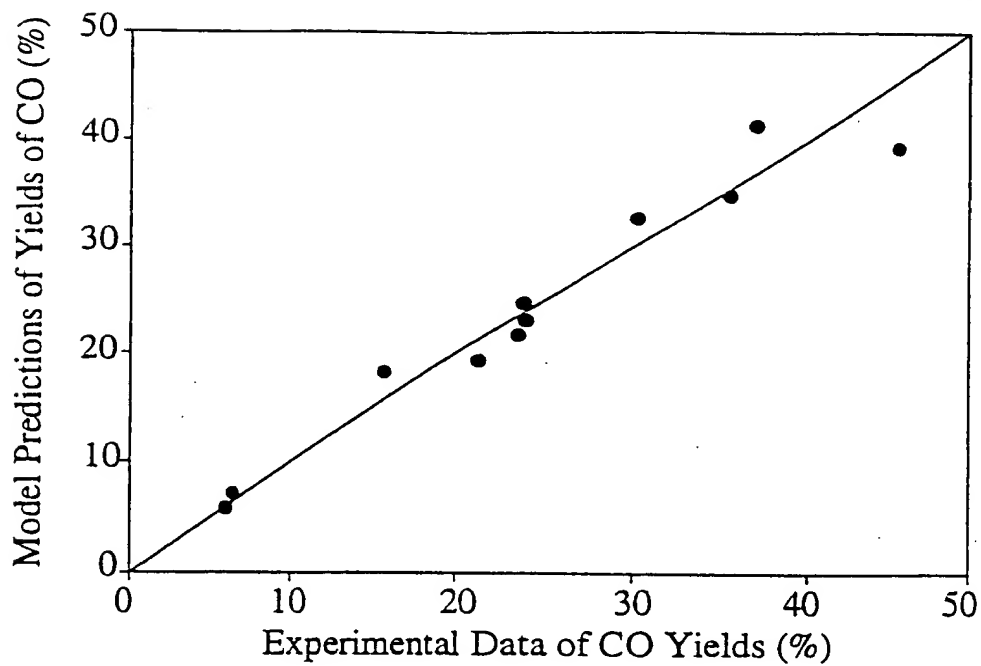Weight %: 15, 12, 6, 3, 0
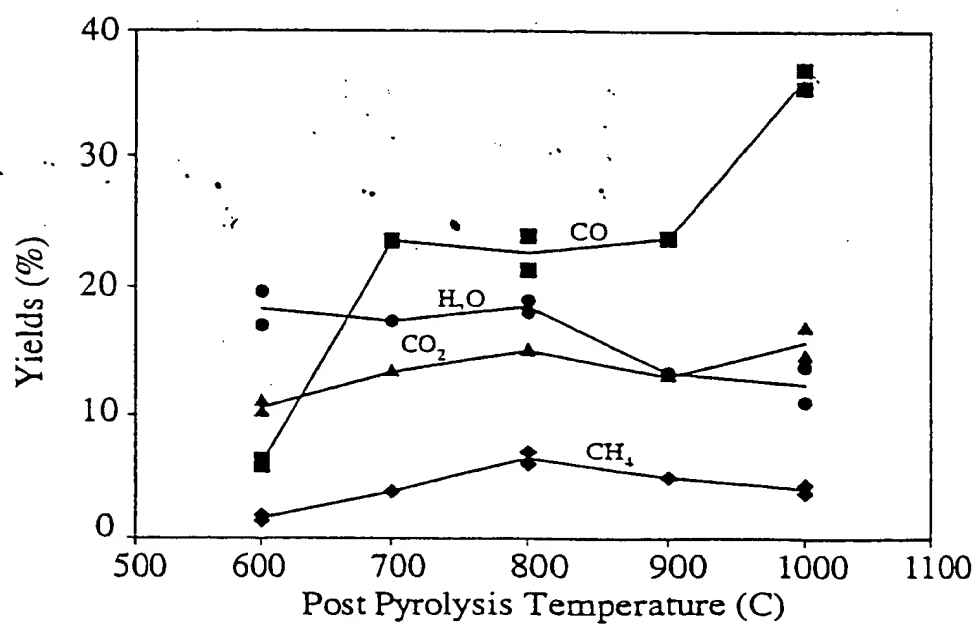
0  20  40  60  80  100

Time (minutes)



**Figure 1.**

Figure 2.

Figure 3

Figure 4.



Figure 5.

FIG. 6